

Introduction The document below provides product safety information for DD Scientific lead based oxygen sensors

Products Covered S+4OX, S+4OX3, S+5OX, S+7OX, S+AOX, DceL O2, S+2OX (and variants)

Manufacturer: DD Scientific Ltd.,
Unit 1, Castle Trading Estate,
Fareham, Hants,
PO16 9SF, UK

1. Composition / information on ingredients

Electrolyte containing potassium acetate, lead, lead oxide, antimony, proprietary catalyst materials, PTFE, plastic housing and metal pins/connections.

2. Hazards Identified

The electrolyte inside the sensor constitutes the largest potential hazard. If the sensor is damaged or tampered with, the electrolyte may leak from the sensor housing.

2.1 Inhalation of electrolyte

Inhalation is not an expected hazard unless a fractured sensor is exposed to high temperatures. Vapour or mist inhalation can cause irritation to the nose, throat and respiratory tract.

2.2 Ingestion of electrolyte

The electrolyte is corrosive. It may cause soreness to throat, abdominal pain, nausea and severe burns of the mouth, throat and stomach.

2.3 Skin or eye contact with electrolyte

The electrolyte is corrosive and may cause redness, pain, blurred vision and eye burns.

2.4 Aggravation of pre-existing conditions

Persons with pre-existing skin disorders or eye problems; impaired respiratory function may be more susceptible to the effects of the electrolyte.

3. First-Aid Measures

In case of leakage;

3.1 Eye contact with electrolyte;

Irrigate thoroughly with clean water for at least 15 minutes. Seek medical advice

3.2 Inhalation of electrolyte;

Remove to fresh air, rest and keep warm. Seek medical advice.

3.3 Skin contact with electrolyte;

Immediately rinse the affected area thoroughly with clean water for at least 15 minutes. Remove contaminated clothing and wash before use again. Seek medical advice if condition continues.

3.4 Ingestion of electrolyte;

If swallowed, do not induce vomiting. Wash mouth out thoroughly with clean water and give clean water to drink. Seek medical advice.

4. Fire fighting measures

The sensors are not considered to be a fire or explosion hazard. Any suitable means of extinguishing surrounding fire should be used.

5. Accidental damage

Should any DD Scientific oxygen sensor be damaged or tampered with to the point that electrolyte leakage occurs, then please follow the following procedure;

5.1 Avoid skin contact with any liquid or internal component of the sensor by the means of protective gloves

5.2 Disconnect the sensor if attached to any instrumentation, electronics or equipment

5.3 Use copious amounts of clean water to wash away any electrolyte spill - this is particularly important since the electrolyte is corrosive and may damage equipment

5.4 Observe first aid measure as described in section 3 above.

6. Handling and Storage

The sensor must not be exposed to temperatures or environmental conditions beyond those specified in the product datasheet. The sensor should not be exposed to solvents or organic vapours which might damage the mechanical housing. The sensors should not be stored near flammable liquid stores.

7. Exposure controls / PPE

In normal operation, none are required.

8. Physical and chemical properties

The sensor is a sealed unit.

9. Stability and reactivity

Not applicable, the sensor is a sealed unit.

10. Toxicological information

The internal electrolyte is corrosive to eyes, respiratory system and skin. The sensors contain lead, lead oxide and antimony which all pose toxicological threat if ingested or exposed to skin. Such exposure can only occur as a result of deliberate damage to the sensor housing which must be avoided. In case of accidental damage, the sensor must be handled as directed in Section 5.

11. Ecological information

The electrolyte may have a harmful effect on aquatic organisms due to a shift in pH. It may have a harmful effect on fish and algae.

12. Disposal considerations

The sensor contains toxic and corrosive compounds irrespective of physical condition. It must be disposed of according to local waste management requirements and the prevailing environmental legislation. The sensor should not be burnt.

13. Transport regulations

DD Scientific's oxygen sensors are classified as UN2800 as "batteries, wet, non-spillable". Per IATA PI 872 and 49CFR 173 159a, they require no special secondary packaging and labels as they are not restricted per IATA Special Provision A67.

14. Regulatory information

R-Phrases: 35

Causes severe burns

S-Phrases: 26-30-45

In the case of contact with eyes, rinse immediately with copious amounts of clean water and seek medical advice. Water should not be added to this product. In case of accident, should you feel unwell seek medical advice immediately.